

**FIG. 1**

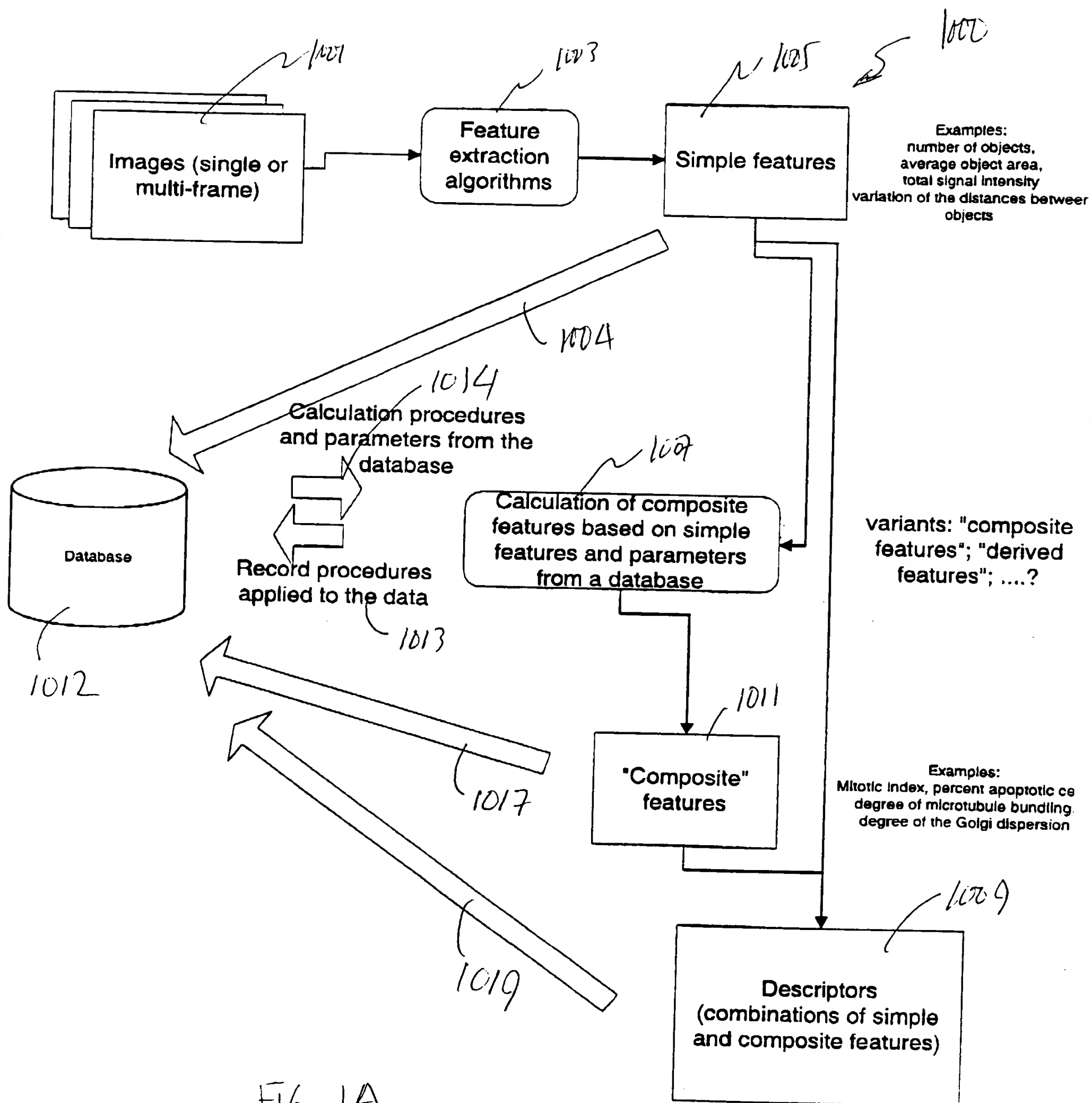
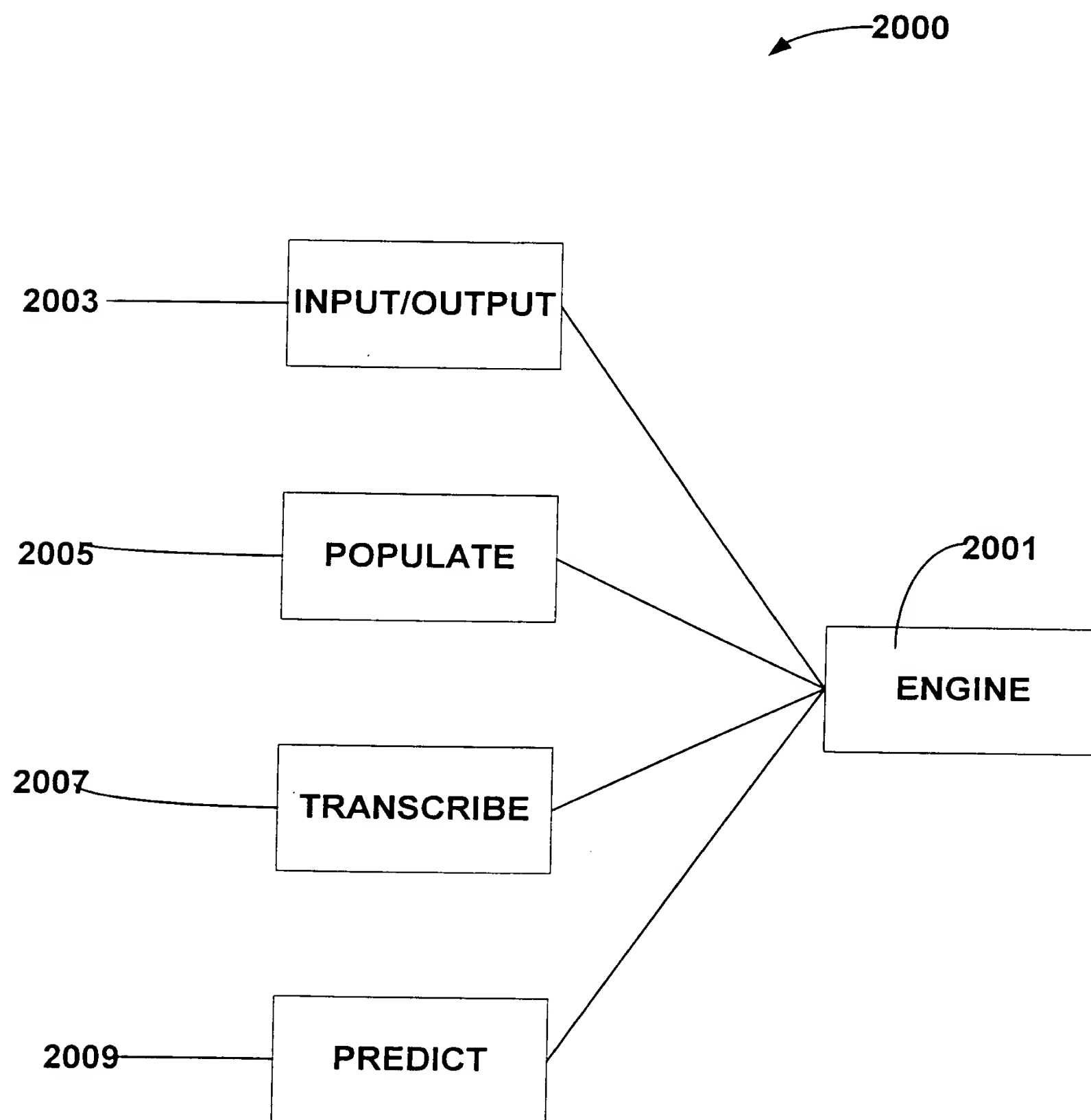
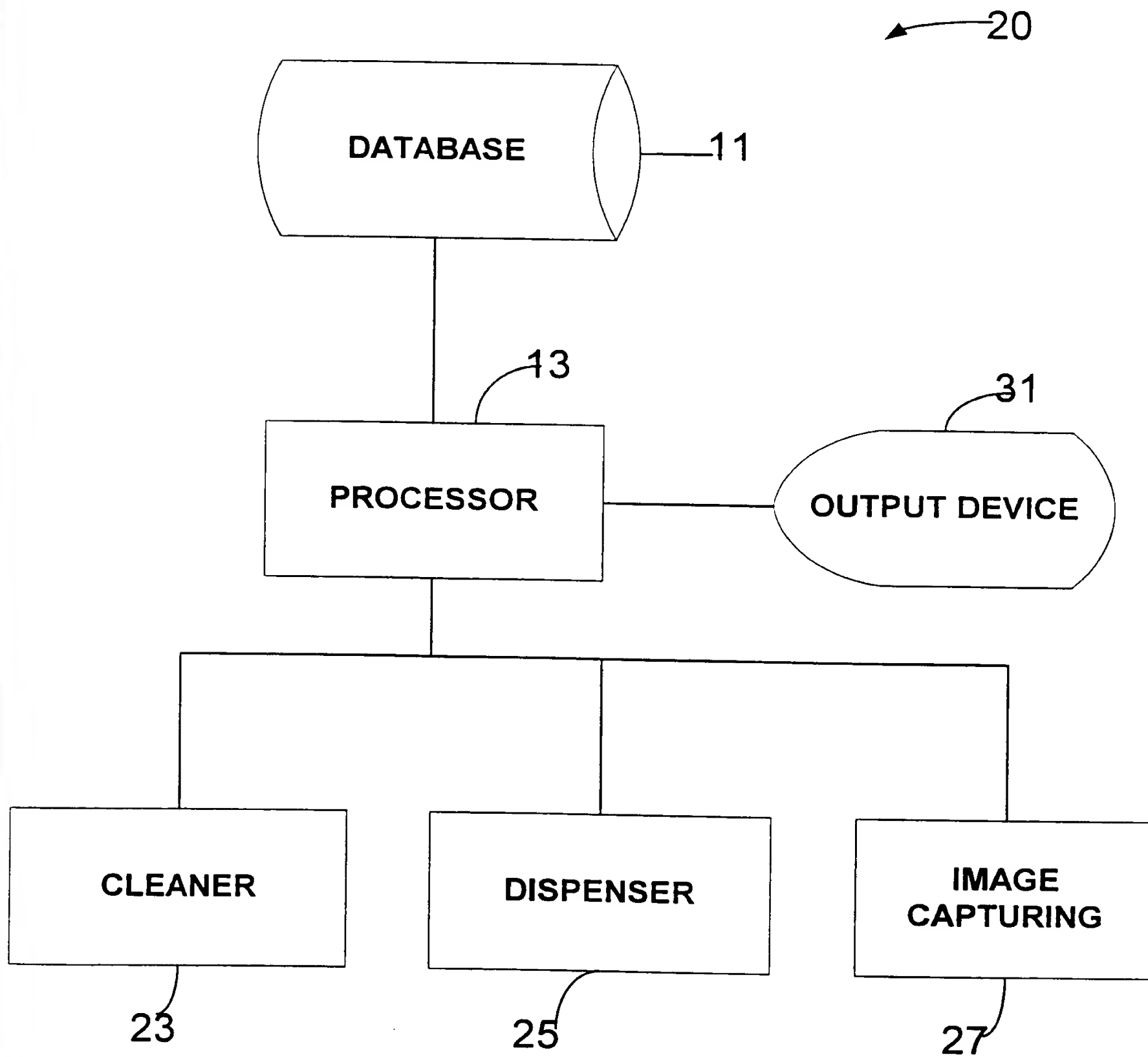


FIG. 1A



**FIG. 1B**



**FIG. 2**

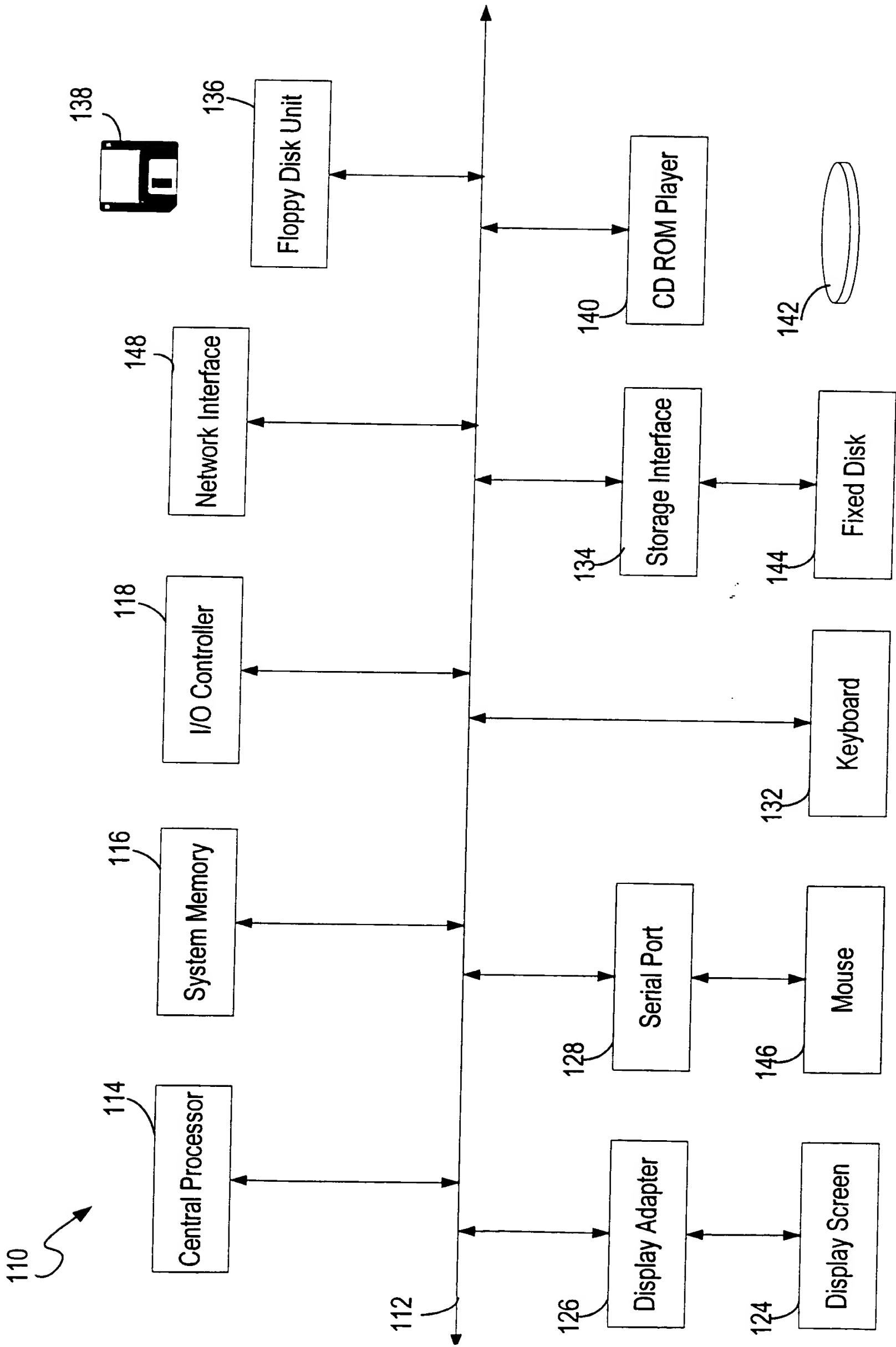
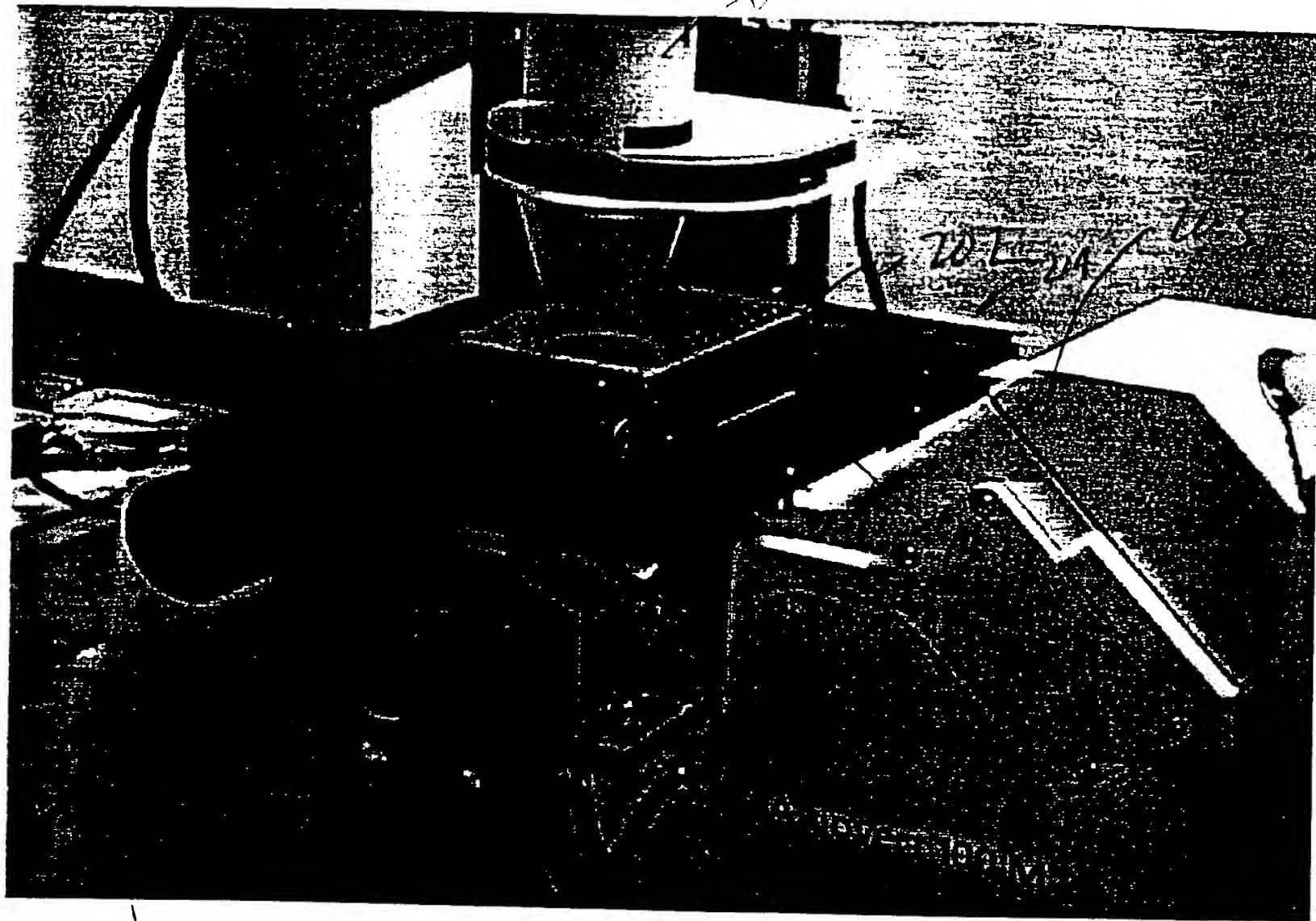


FIG. 3



210

FIG. 4

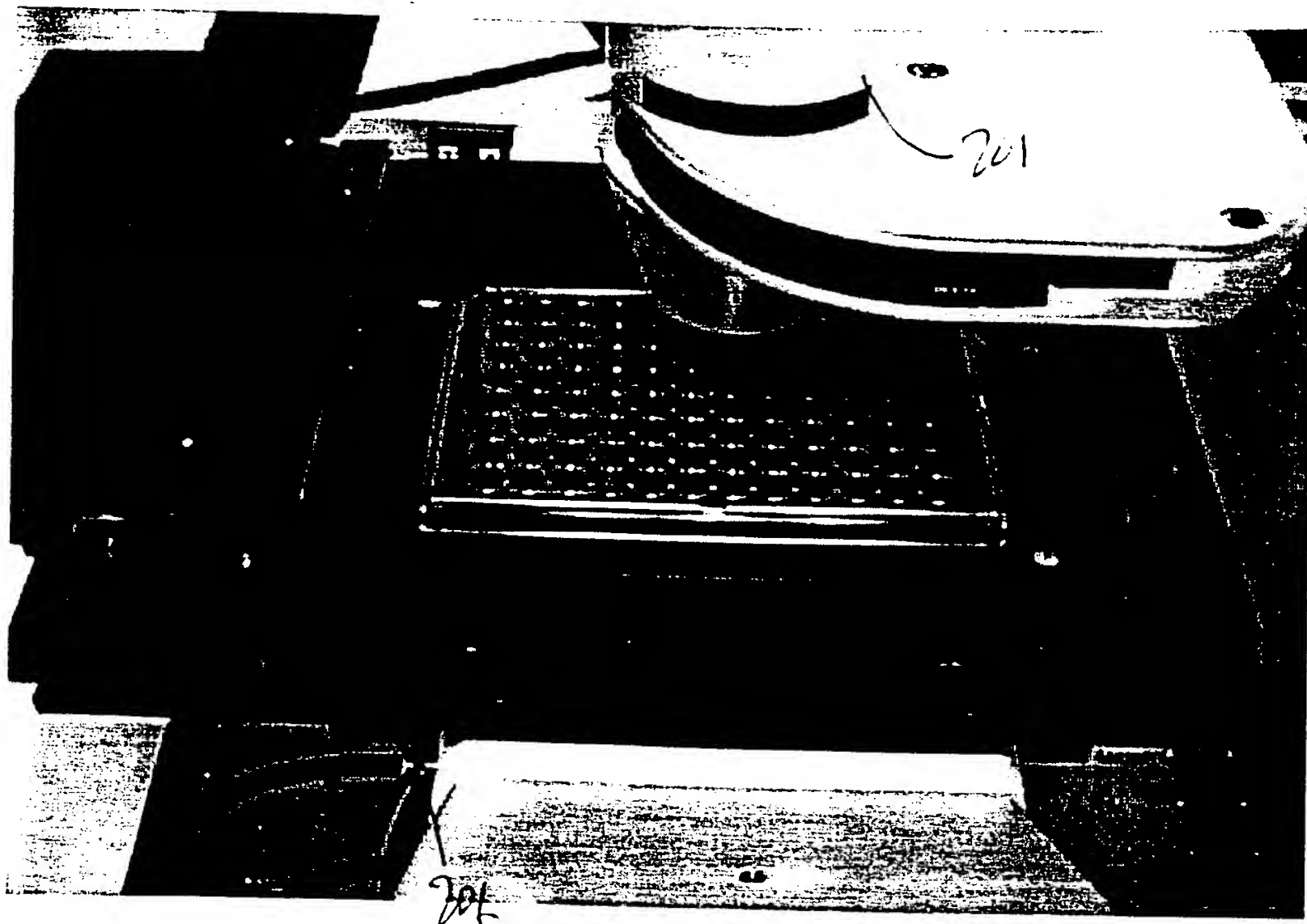
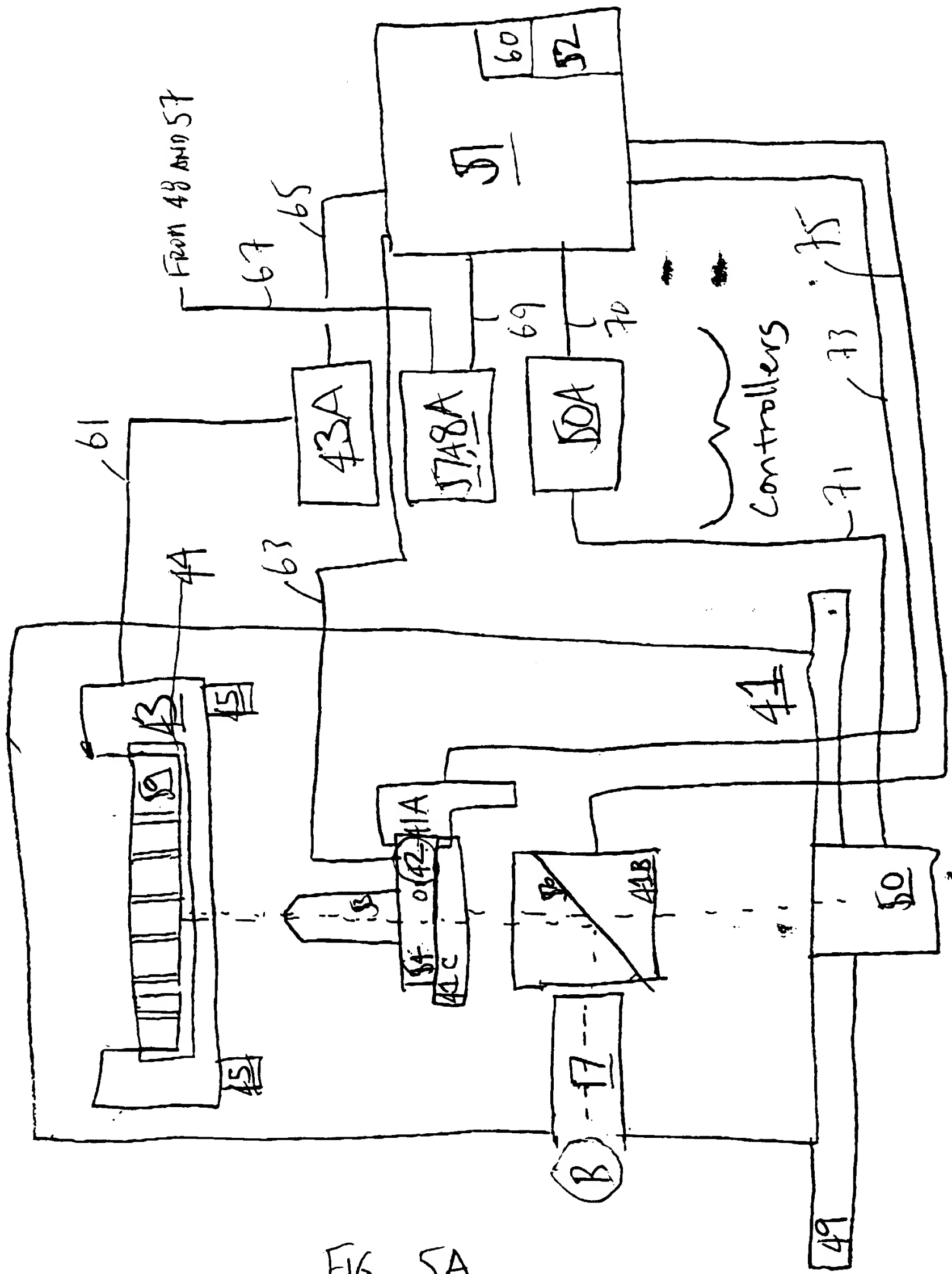
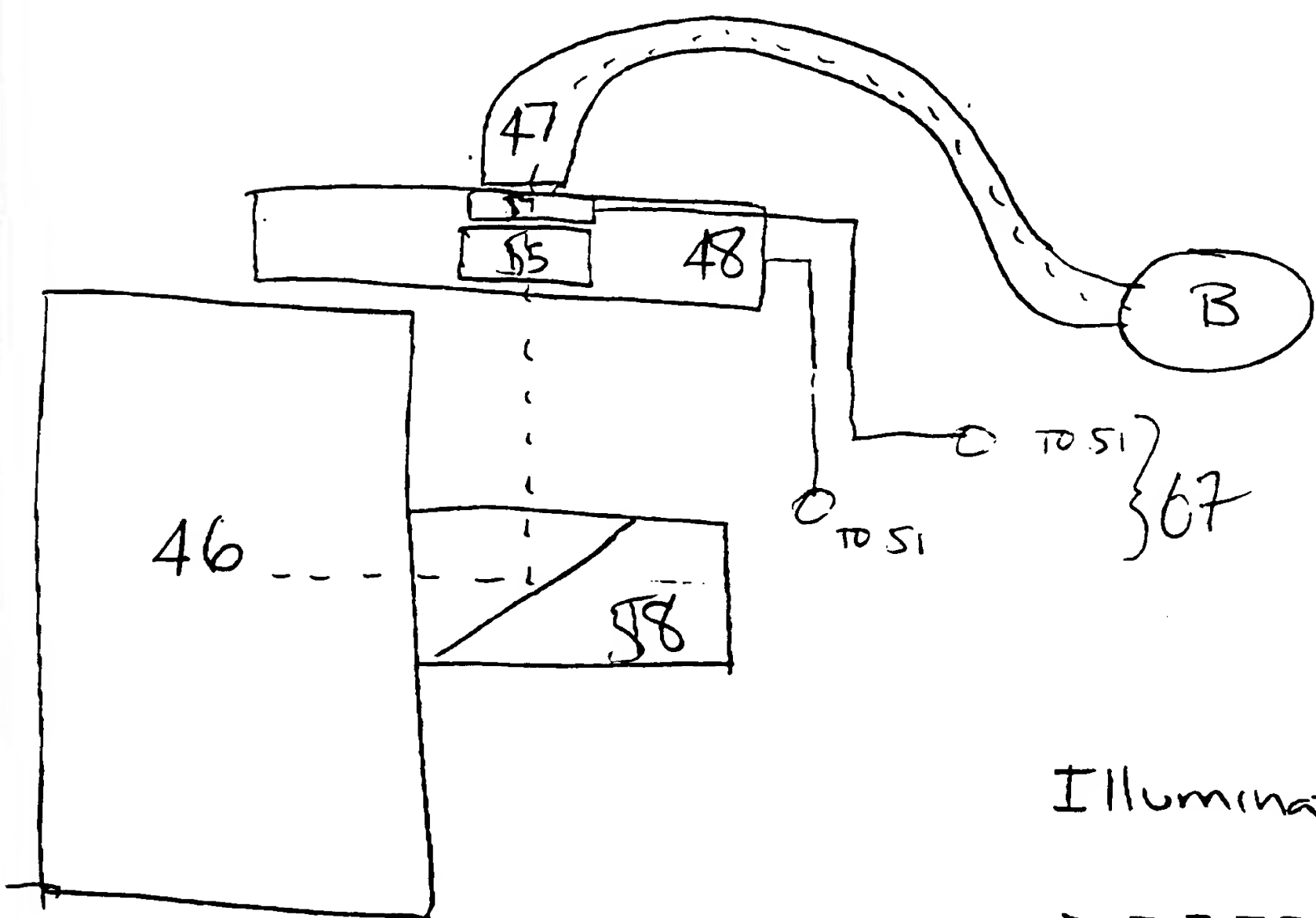


FIG 5

FIG. 5A



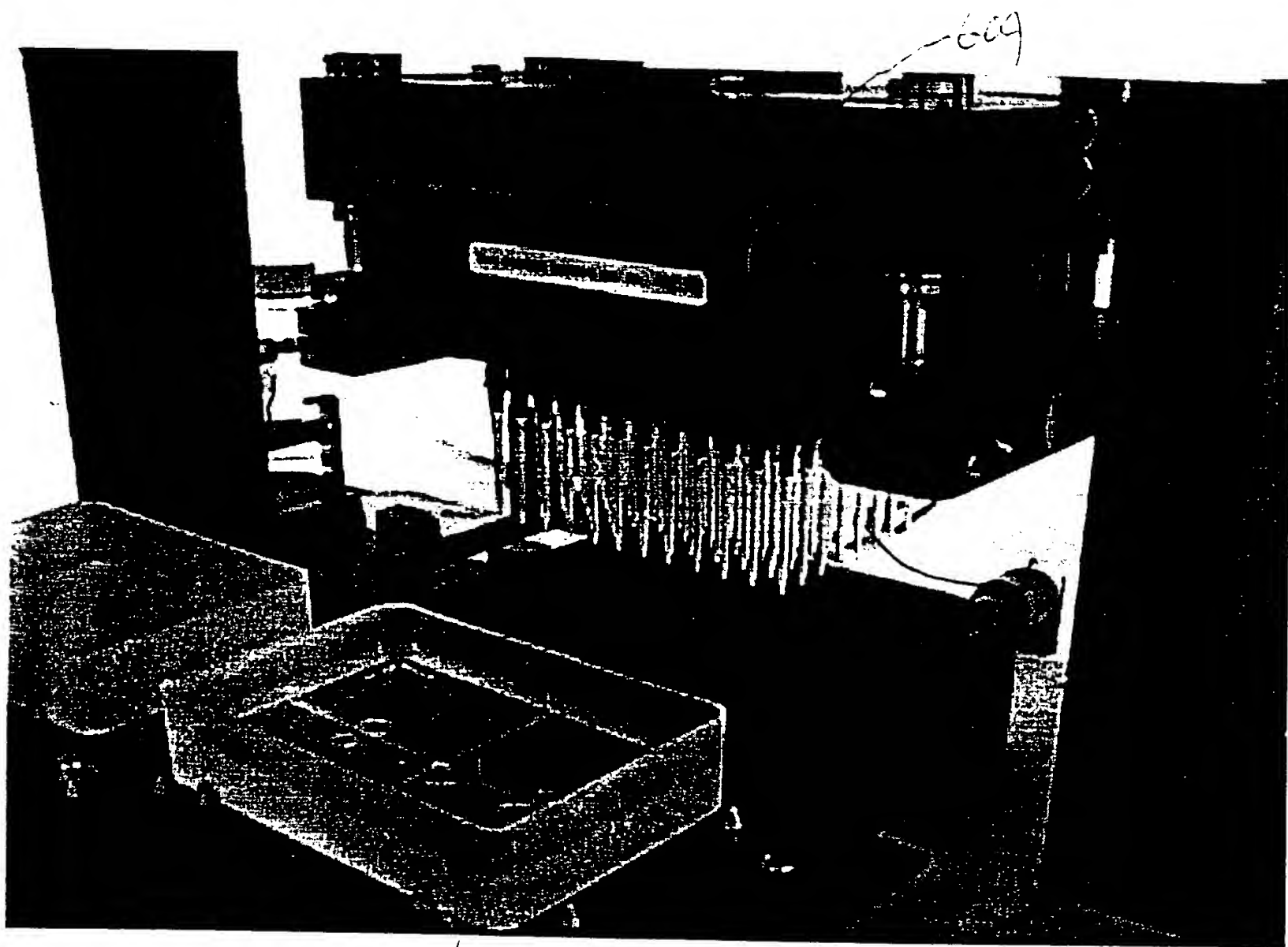
62



Illumination

----- light path

FIG. 5B



605

603

602

607

FIG. 6

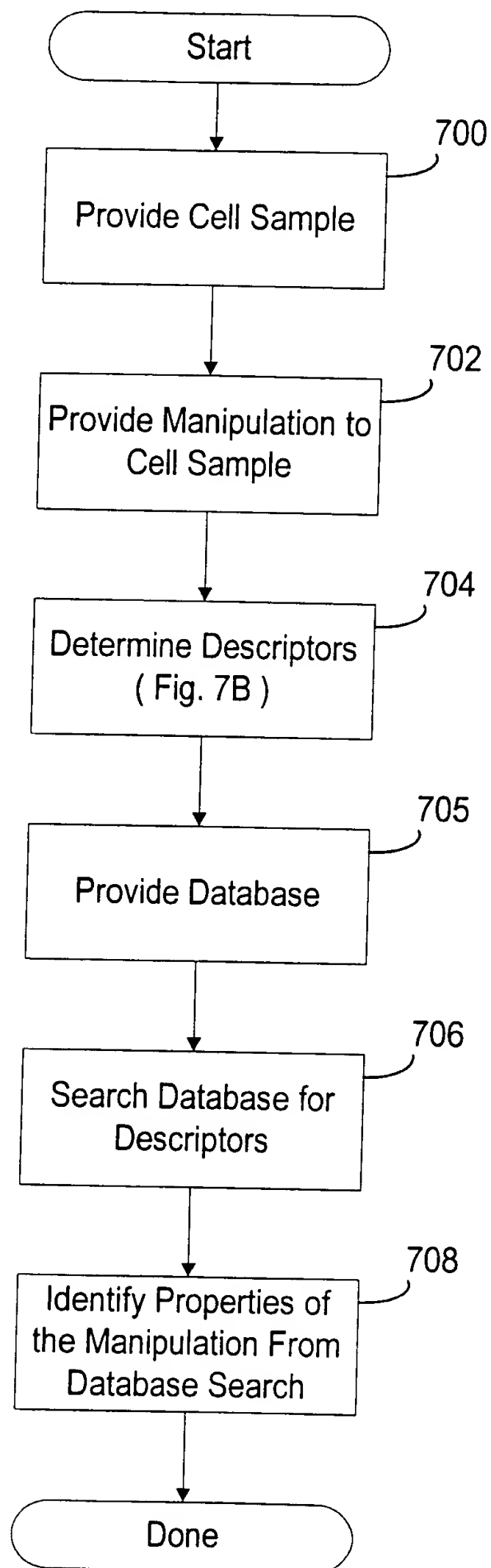


Fig. 7A

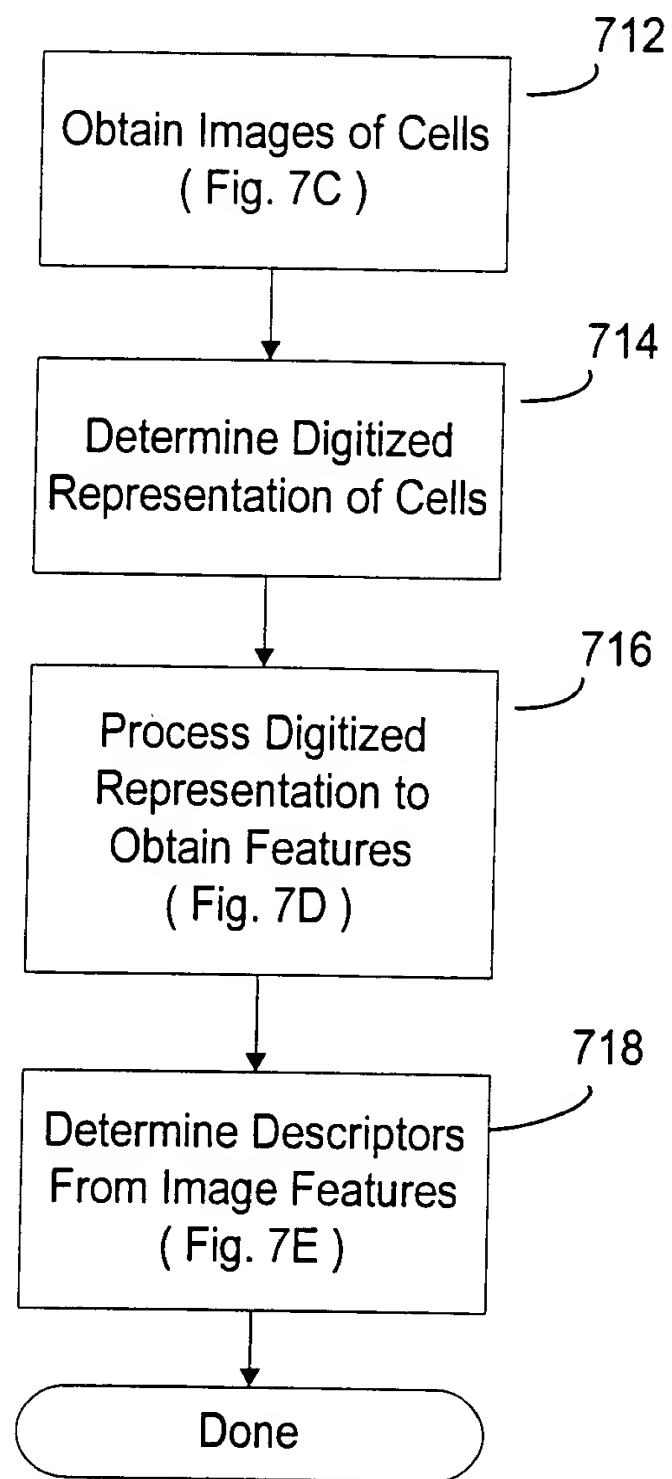


Fig. 7B  
Step 704 of Fig. 7A

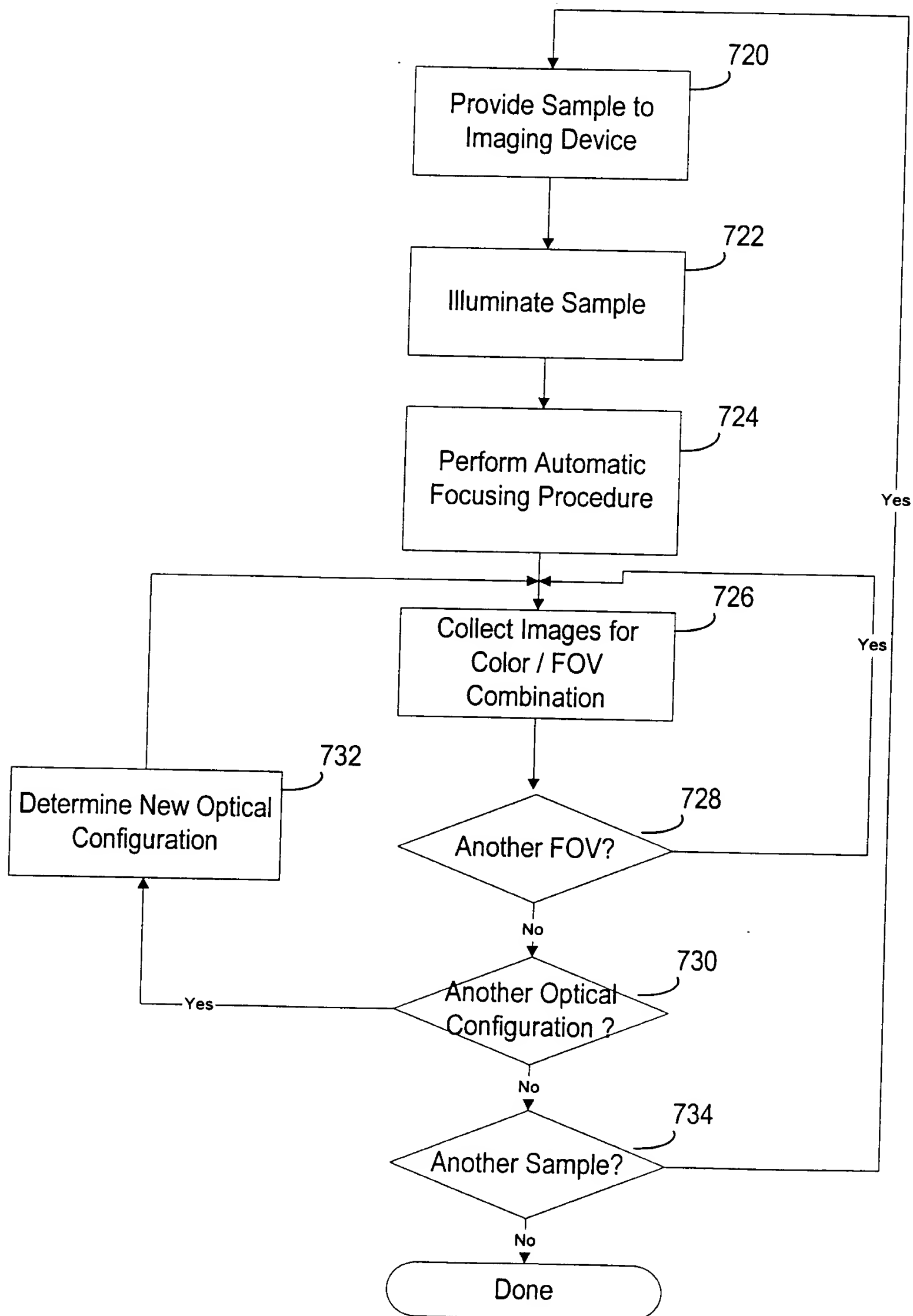


Fig. 7C  
Step 714 of Fig. 7B

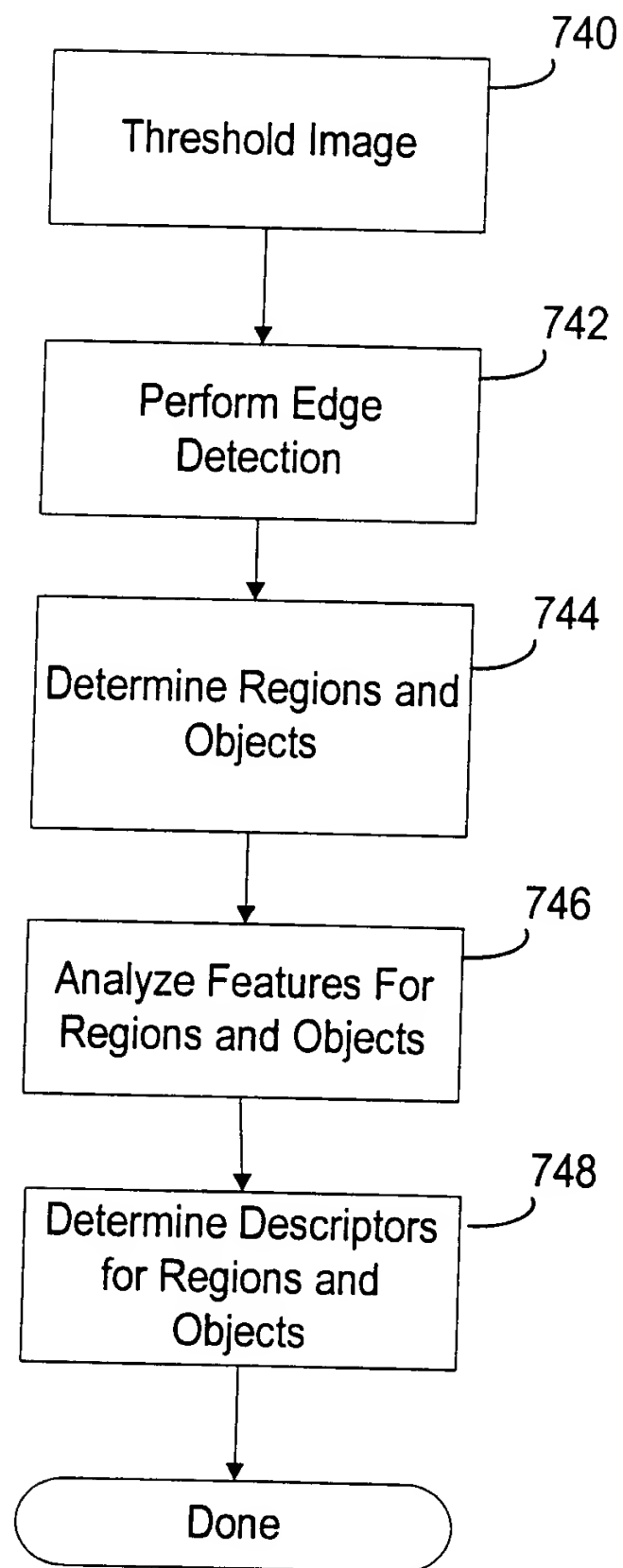


Fig. 7D  
Step 716 of Fig. 7B

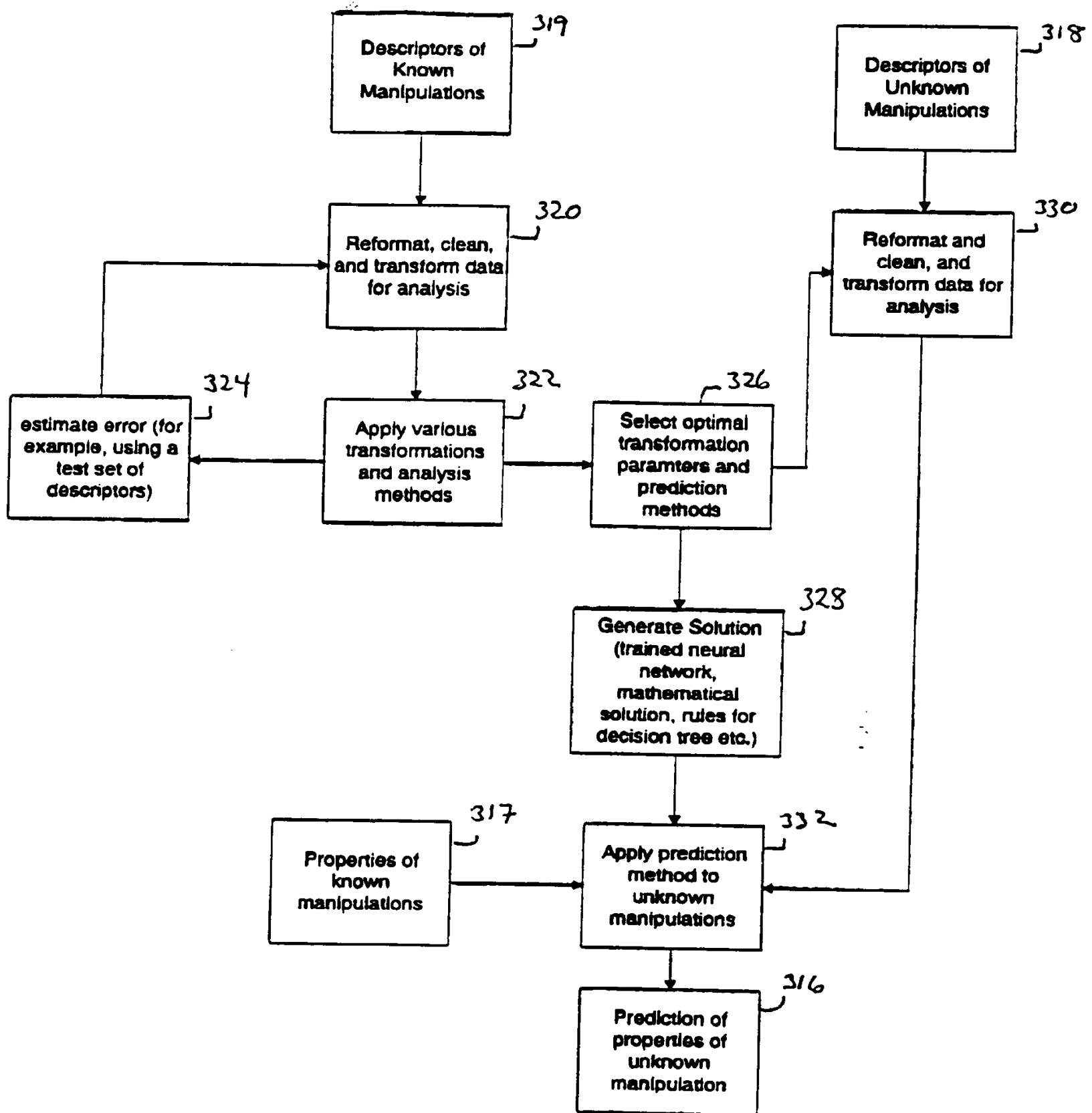


FIG. 7E

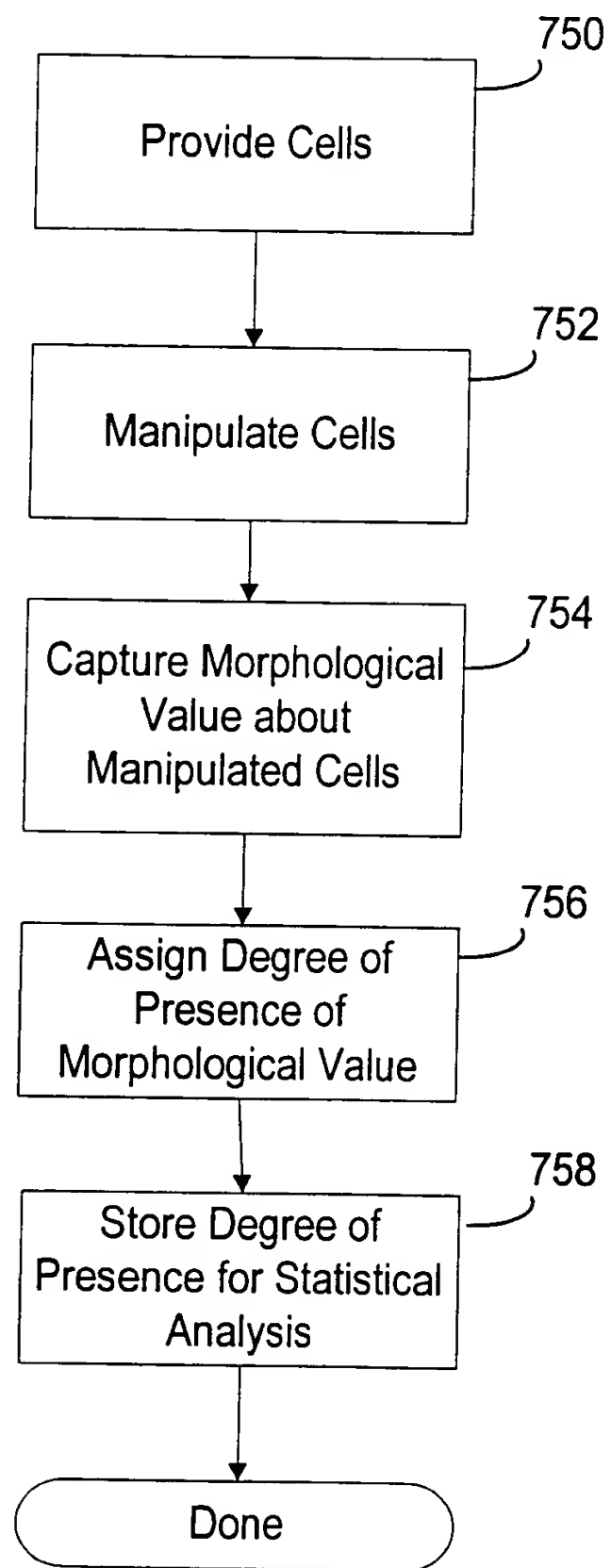


Fig. 7F

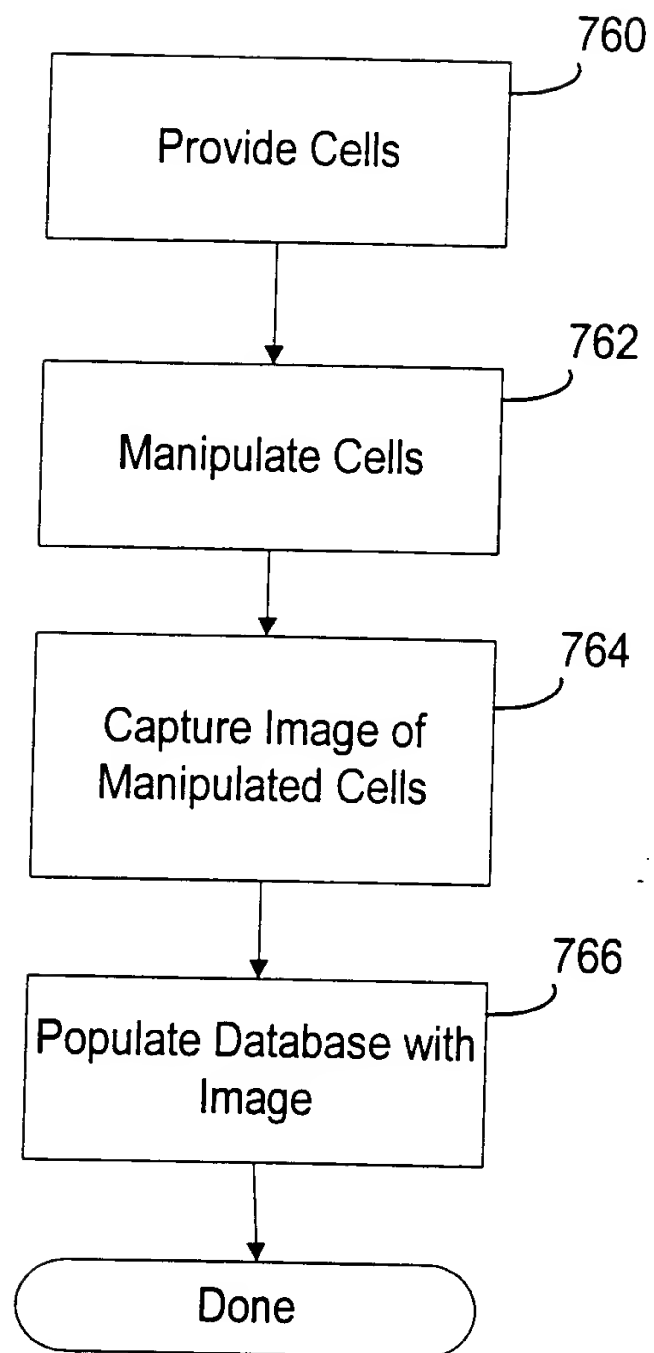
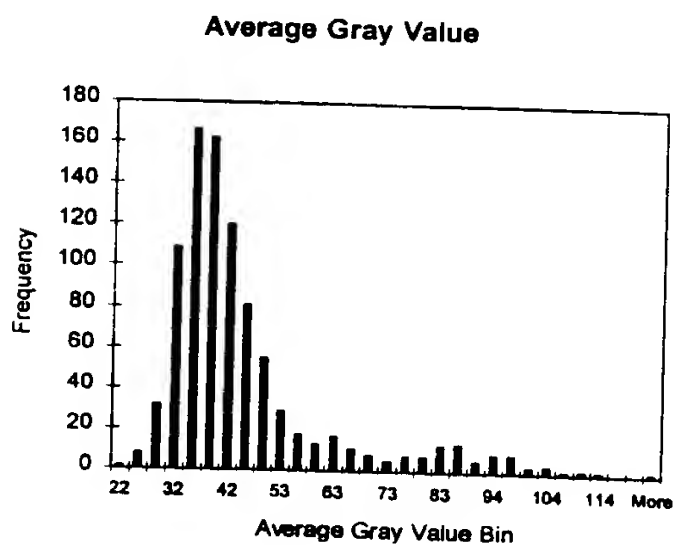
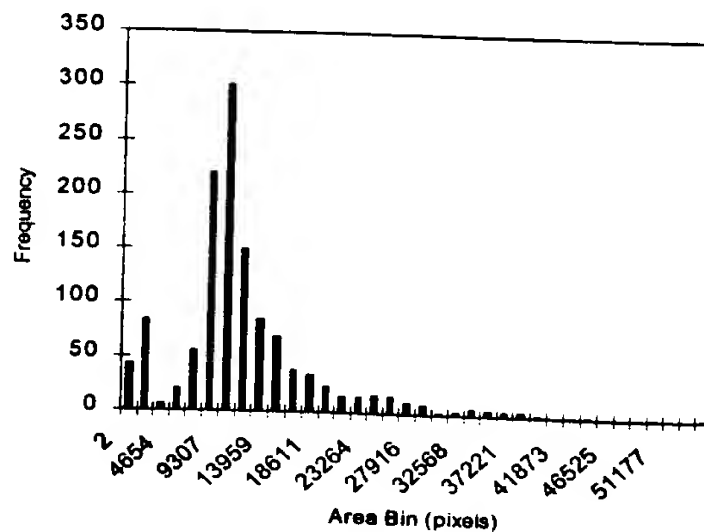


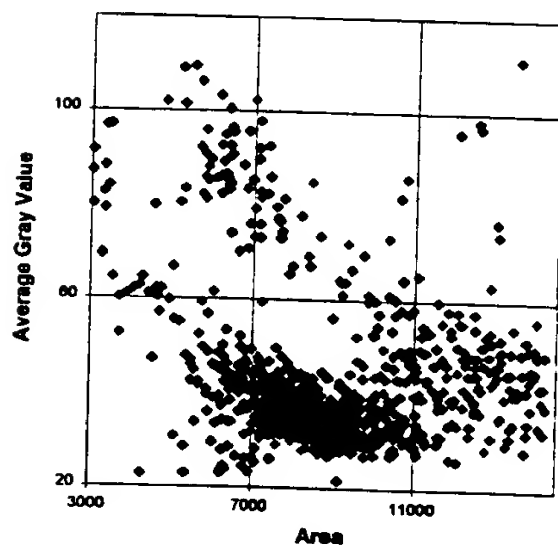
Fig. 7G



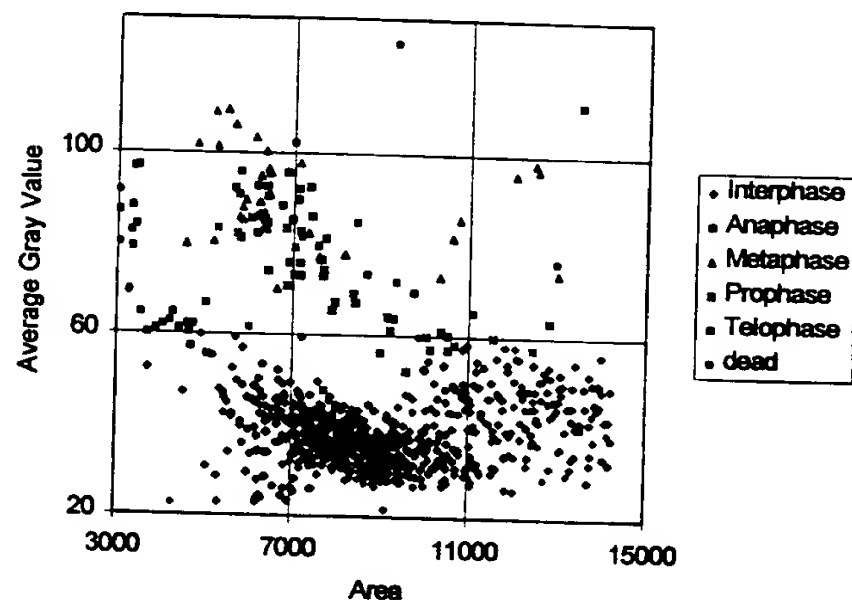
**Fig. 8A**



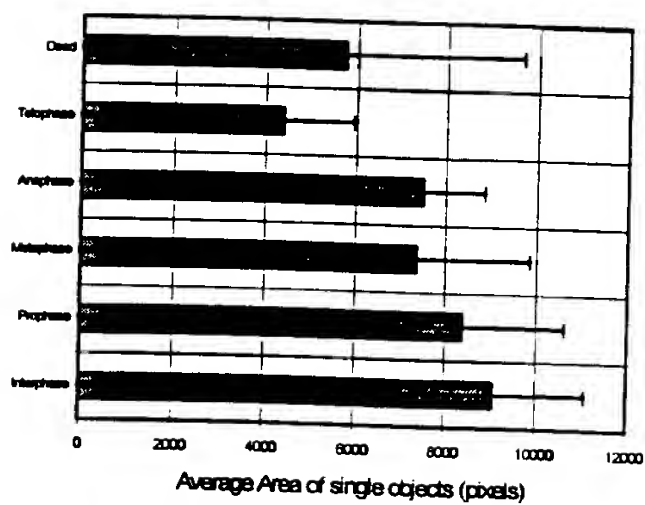
**Fig. 8B**



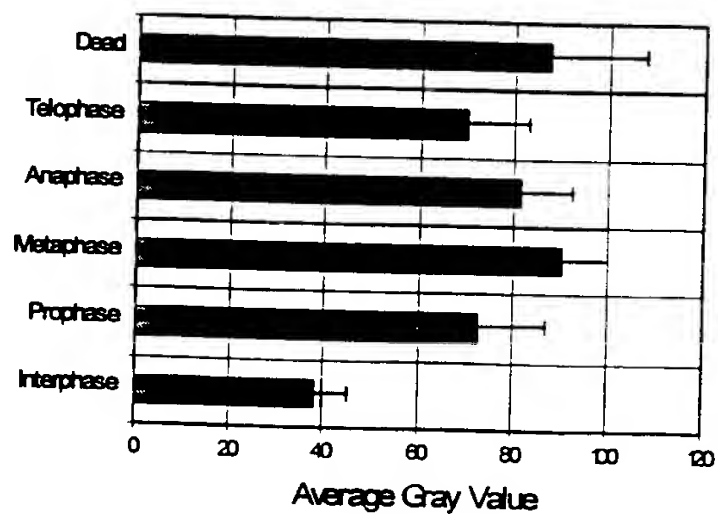
**Fig. 8C**



**Fig. 8D**



**Fig. 8E**



**Fig. 8F**

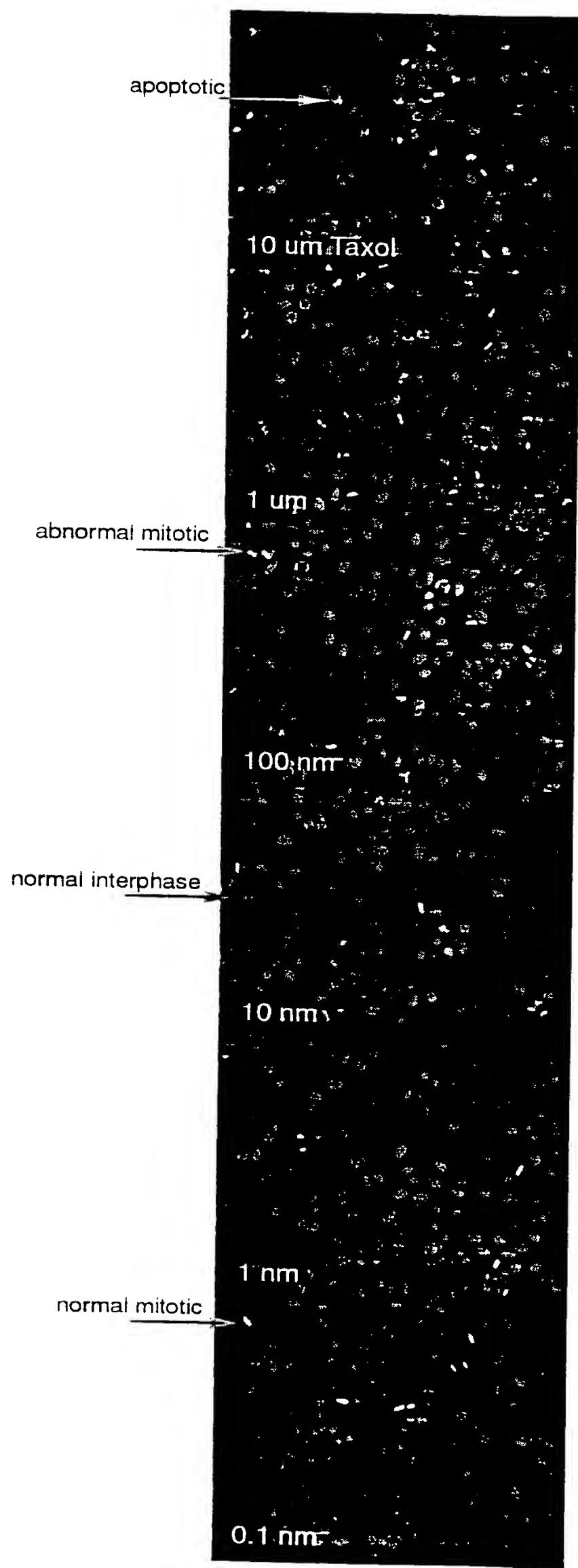


Fig 9

MDCK cells treated with Taxol for 4.5 hours

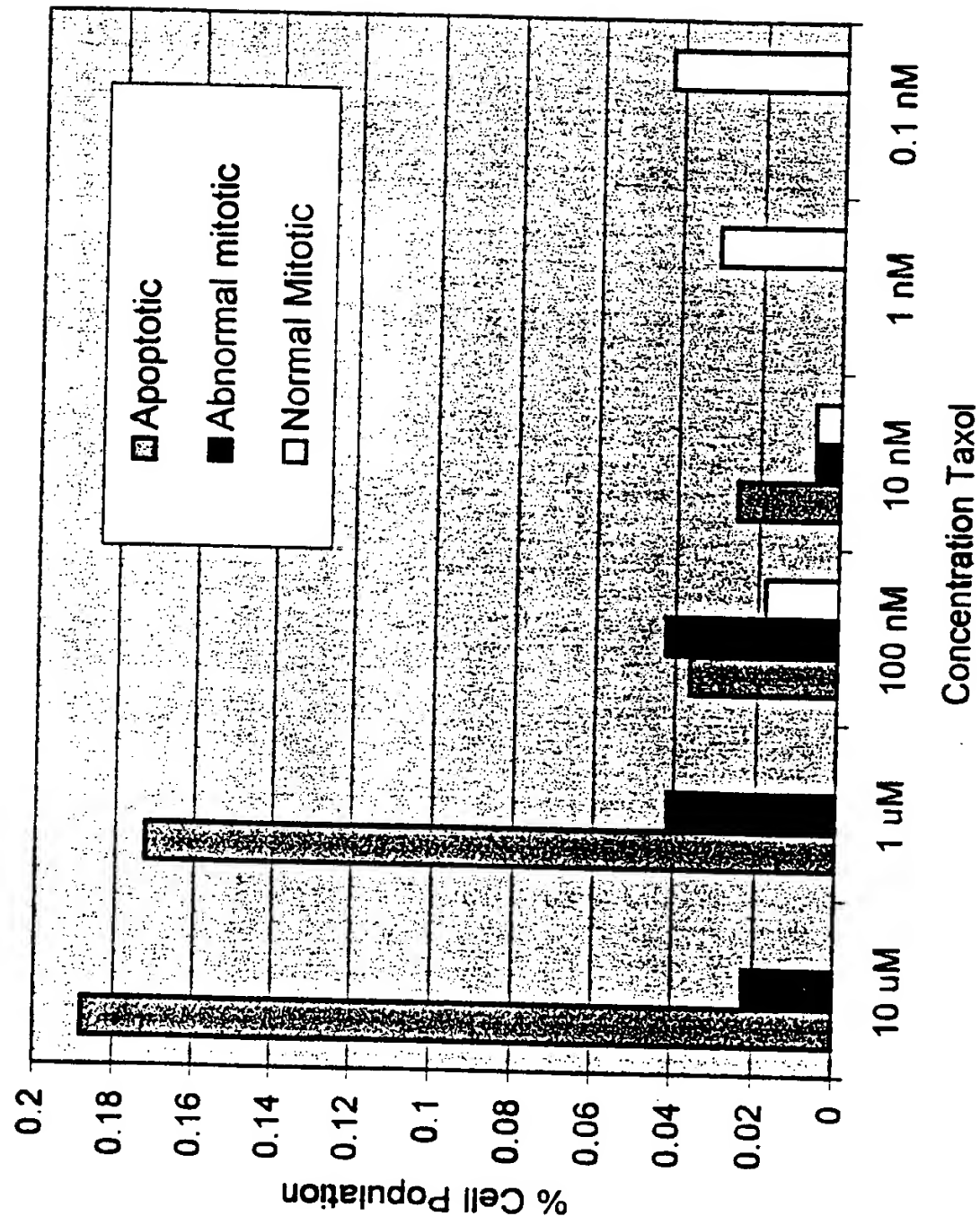


FIG. 10

Scatter Plot

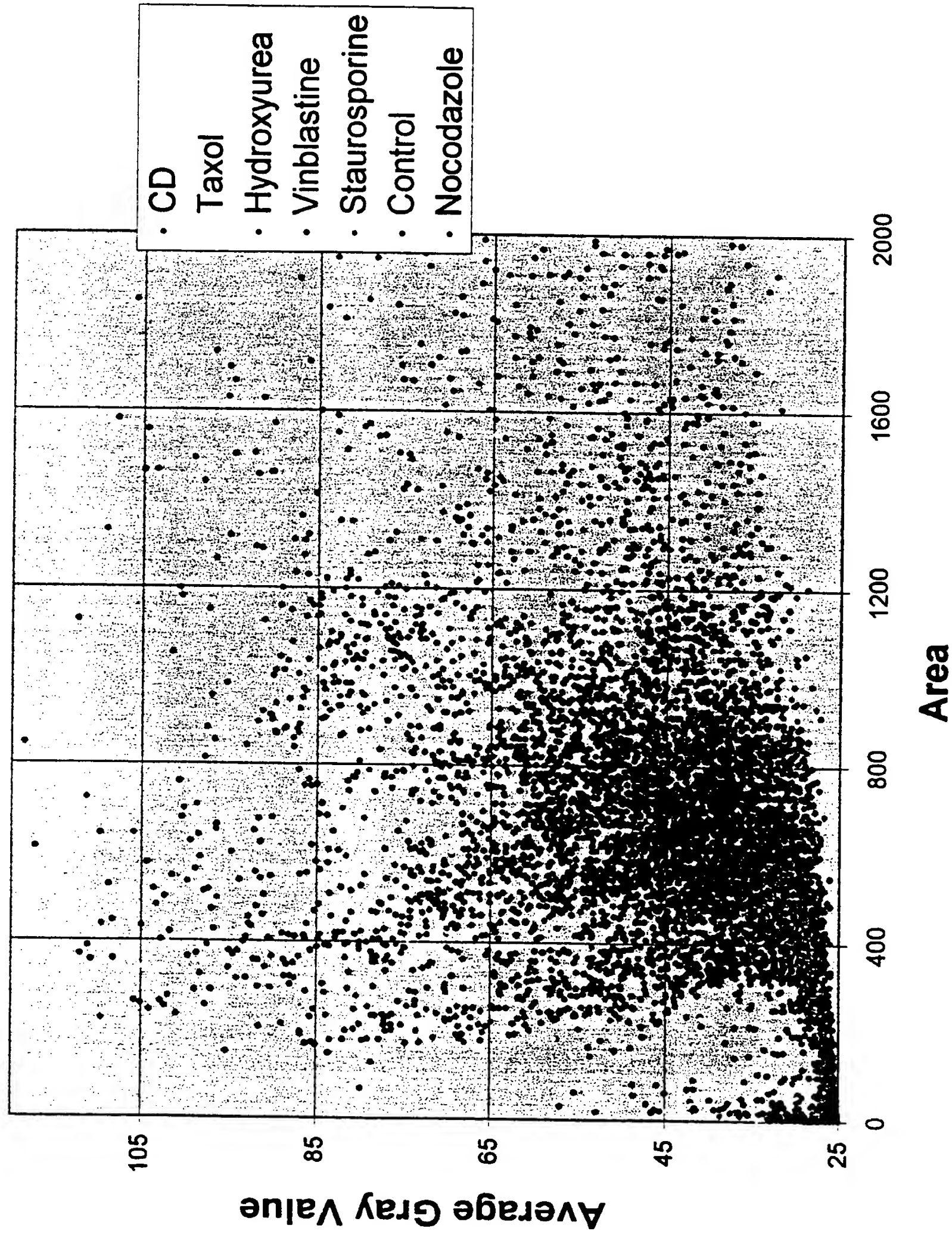


FIG. 11

Normal

Cytochalasin D

Colchicine

H  
o  
e  
c  
h  
s  
t

P  
h  
a  
l  
l  
o  
i  
d  
i  
n  
/  
A  
c  
t  
i  
n

FIG 12

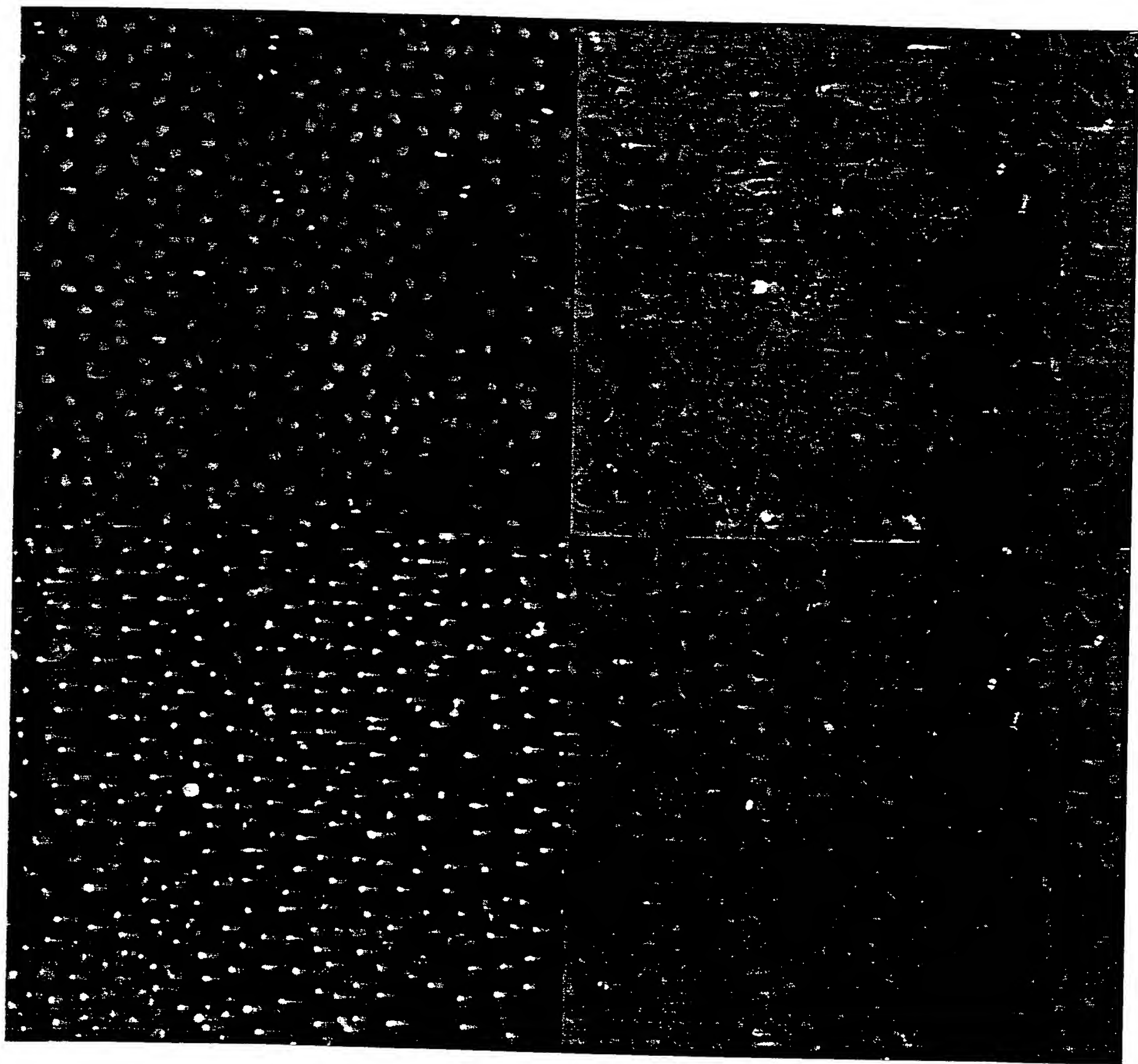


FIG. 13

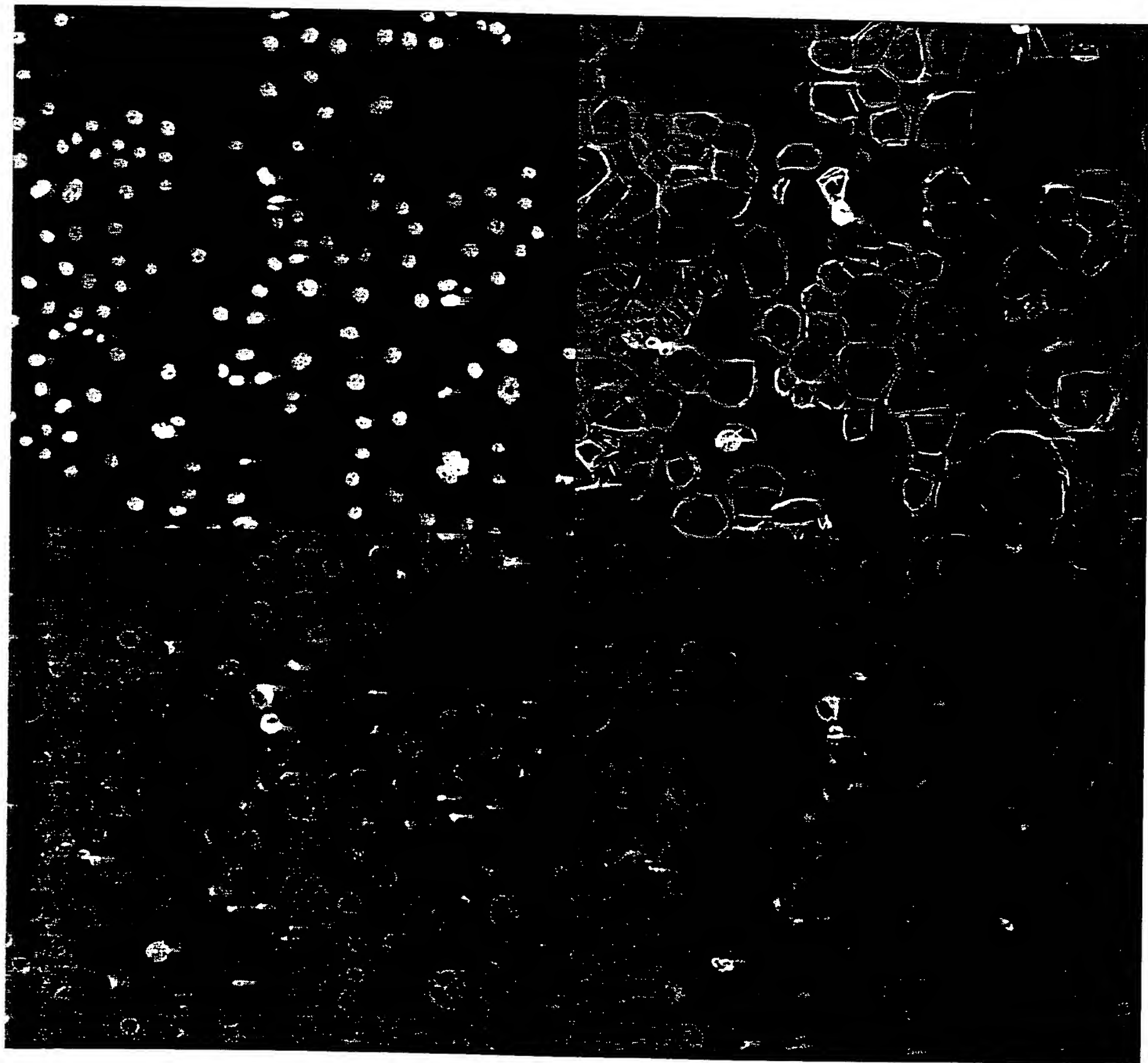


FIG. 14

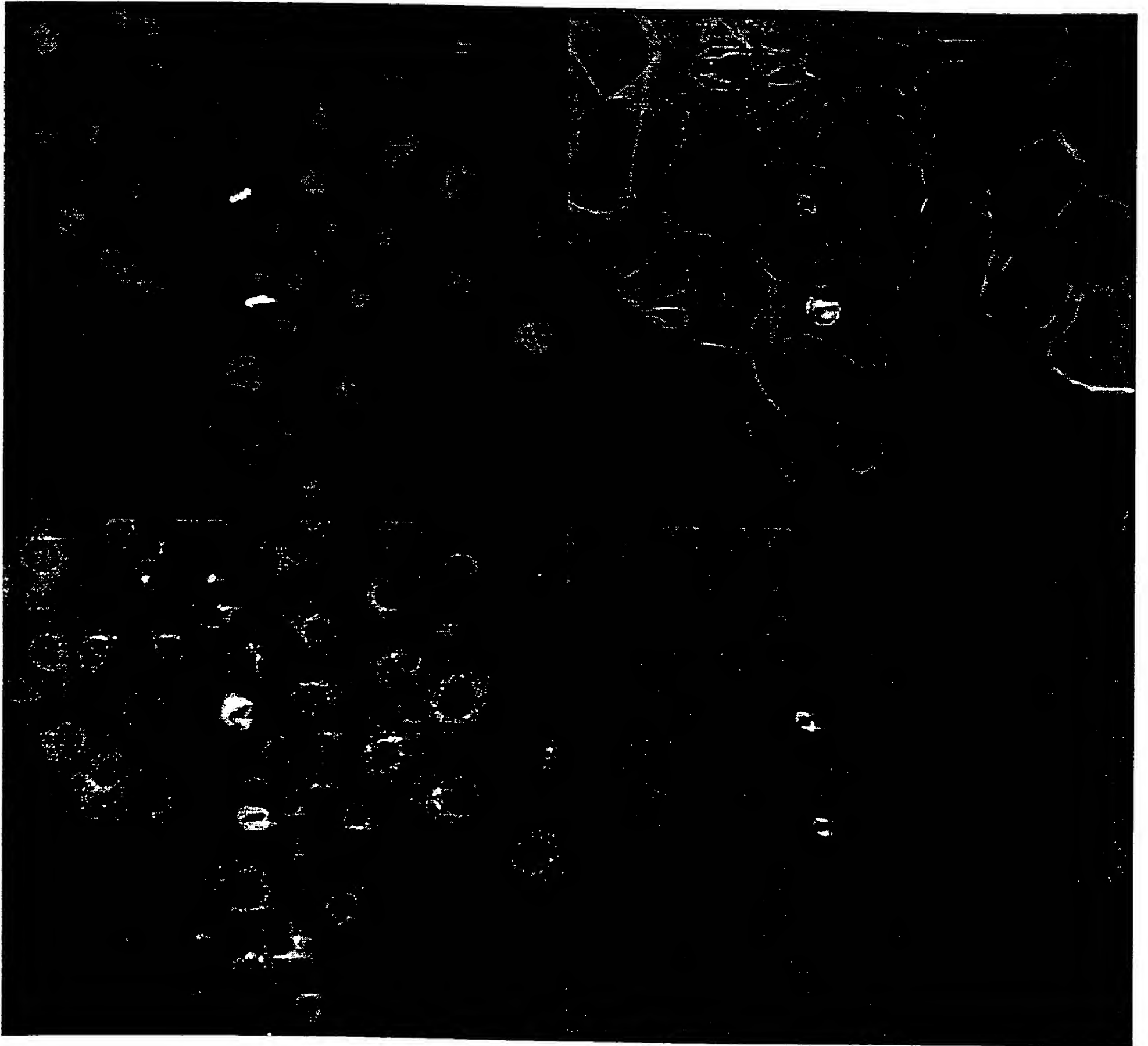


FIG. 15

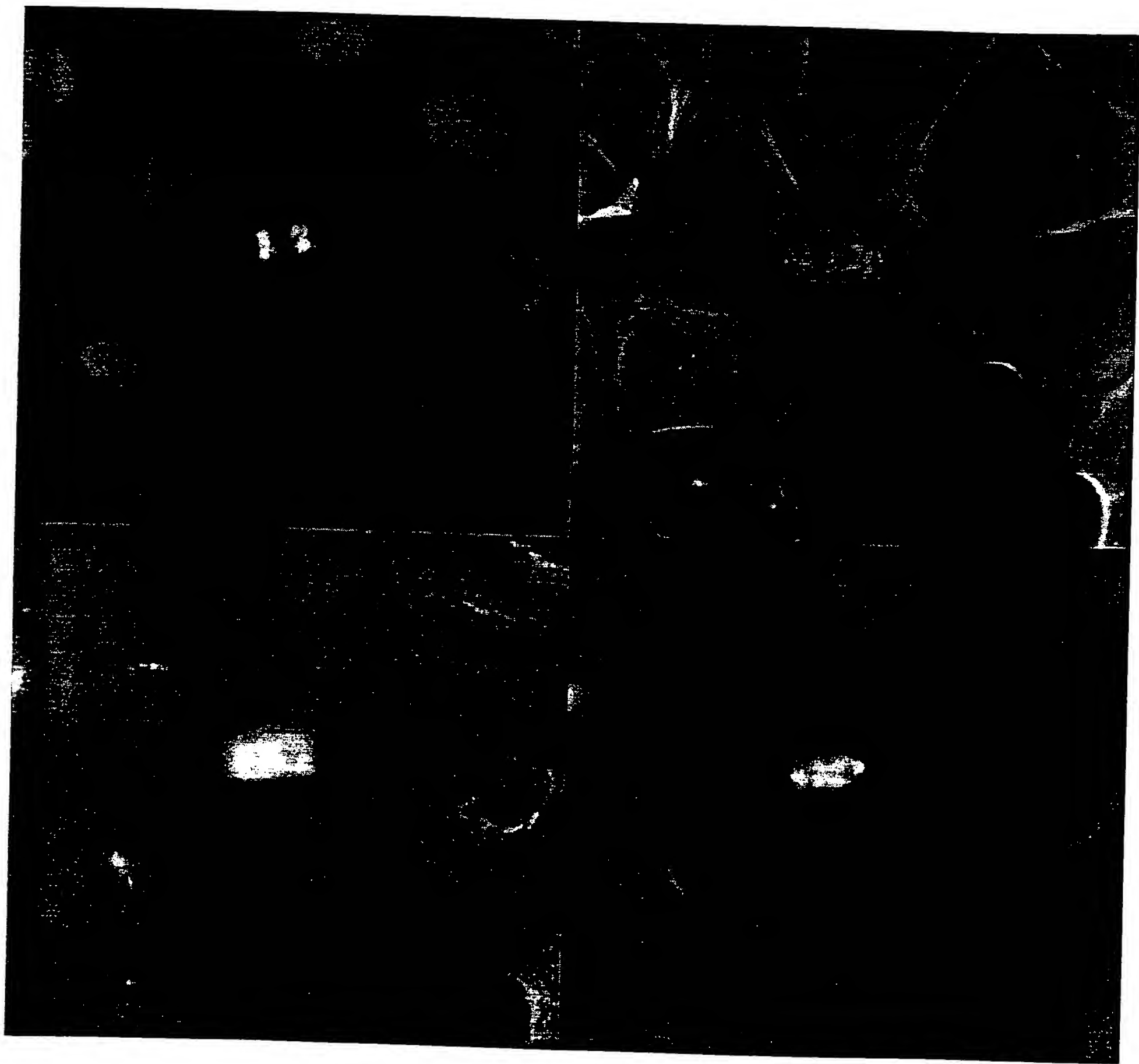


FIG. 16

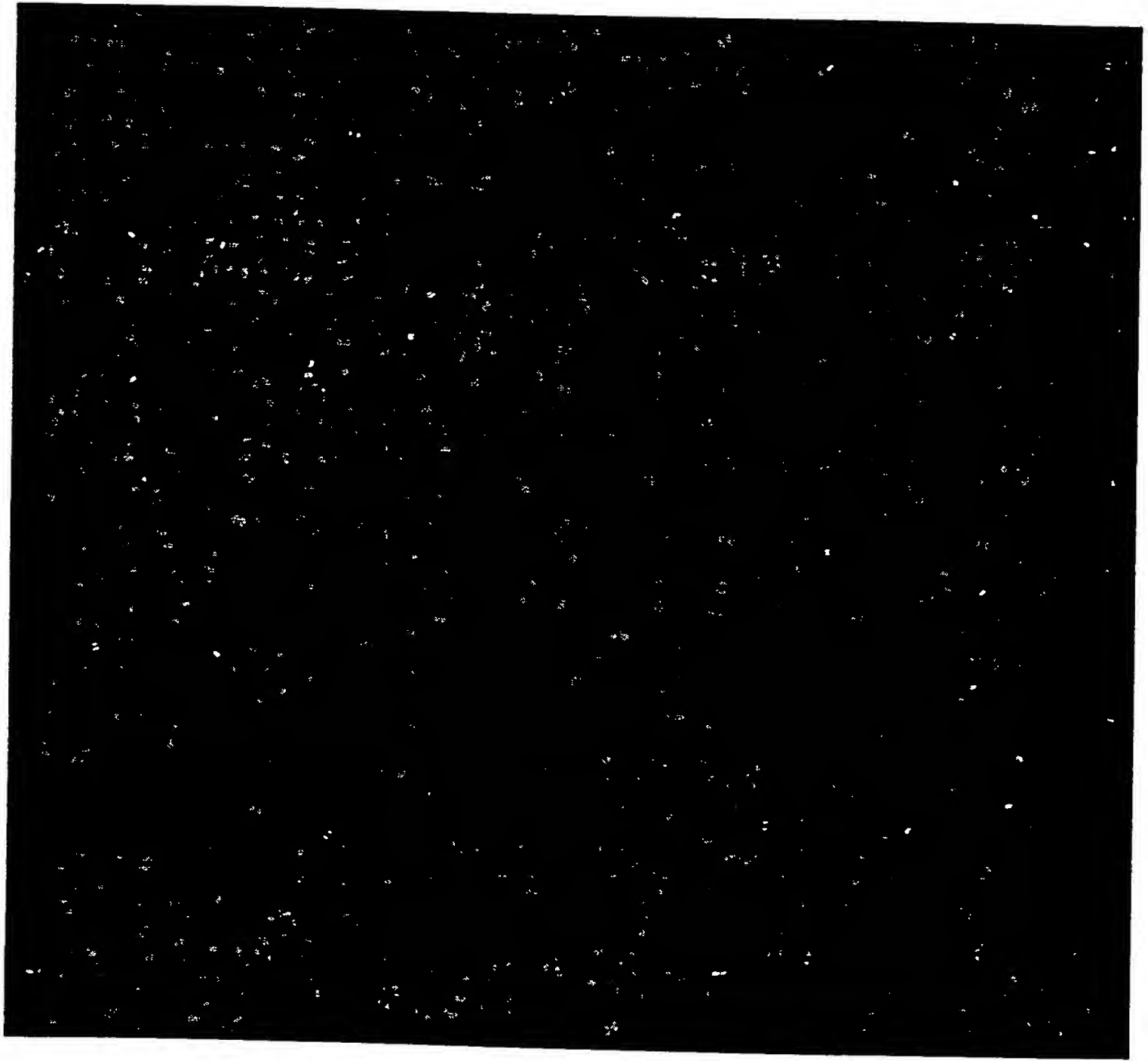


FIG. 17

Conversion of morphometric parameters into nucleic acid code and clustering of the resulting sequences using Neighbor Joining method.

Compound:	Measurements																								
	Count	Area	Perimeter	Length	Breadth	Fiber length	Fiber breadth	Shape factor	Ell. form factor	Inner radius	Outer radius	Mean radius	Equiv. radius	Equiv. sphere vol.	Equiv. prolate vol.	Equiv. oblate vol.	Equiv. sphere surface area	Average gray value	Total gray value	Optical density	Radial dispersion	Texture Difference Moment	EFA Harmonic 2, Semi-Maj	EFA Harmonic 2, Semi-Min	
Control	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	a	t	t	
Taxol	a	t	t	t	t	t	t	t	a	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	
CD	c	a	a	a	t	a	t	t	c	a	a	a	a	a	a	a	a	t	a	a	a	t	a	g	
Nocodozol	c	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	
Staurosporine	g	g	c	a	a	t	a	a	t	g	a	a	a	t	g	g	g	a	a	t	a	t	a	a	
Vinblastine	c	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	g	t	t	t	t	t	
Hydroxyurea	g	t	t	t	t	t	t	g	t	t	t	t	t	t	t	t	t	t	t	c	t	a	t	t	

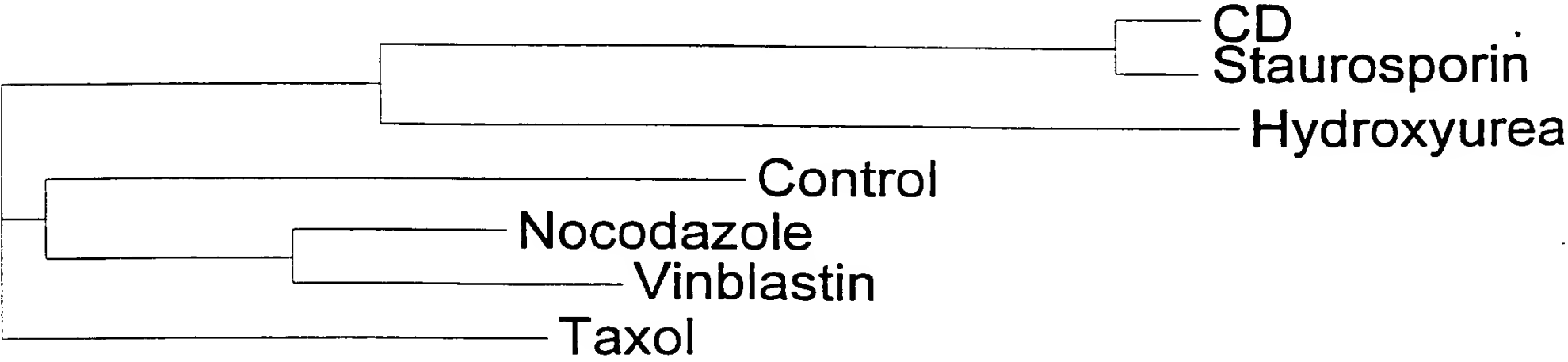


FIG 18

Conversion of morphometric parameters into amino acid codes  
and clustering of the resulting sequences using Neighbor  
Joining method.

	Count	Area	Perimeter	Length	Breadth	Fiber length	Fiber breadth	Shape factor	Ell. form factor	Inner radius	Outer radius	Mean radius	Equiv. radius	Equiv. sphere vol.	Equiv. prolate vol.	Equiv. oblate vol.	Equiv. sphere surface a	Average gray value	Total gray value	Optical density	Radial dispersion	Texture Difference Mo	HEFA Harmonic 2, Semi-	HEFA Harmonic 2, Semi-
Control	I	D	I	I	Z	S	D	W	M	S	I	I	I	P	C	C	D	D	M	C	I	G	I	I
Taxol	G	F	M	M	P	M	P	H	G	S	M	M	W	C	F	P	F	D	M	C	I	G	I	I
CD	F	G	G	G	M	G	M	K	A	G	G	G	G	G	G	G	G	H	G	M	M	H	M	P
Nocodazol	W	F	M	M	W	M	P	T	R	S	M	M	M	F	M	W	F	M	M	R	M	M	G	V
Staurosporine	N	V	A	G	G	M	G	G	Y	V	G	G	G	M	V	V	V	G	G	H	G	M	G	G
Vinblastine	F	W	W	M	W	W	C	W	D	S	M	W	W	M	M	M	M	W	M	V	E	M	M	F
Hydroxyurea	S	H	H	H	H	H	H	V	H	H	H	H	H	H	H	H	H	H	H	A	H	G	H	D

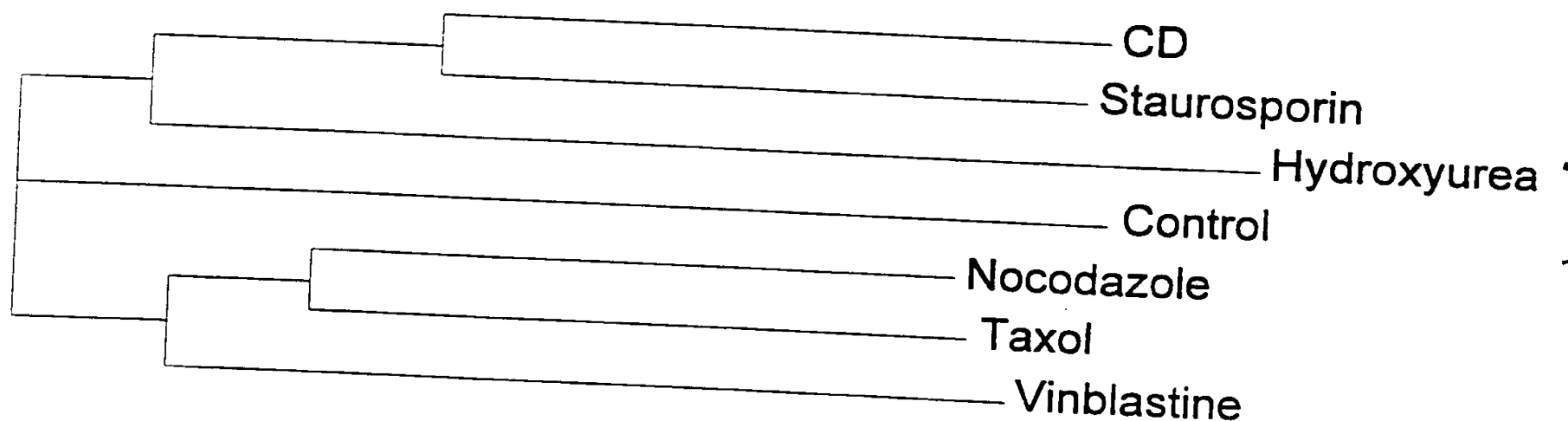


FIG. 19